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IBM CORPORATION, T.J. WATSON RESEARCH CENTER
P.O. BOX 218
YORKTOWN HEIGHTS, NY 10598

EXAMINER
PRICE, NATHAN E

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>09 December 2007</u>.

2a)☒ This action is FINAL.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19 and 24-29* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19 and 24-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

WILLIAM THOMSON
SUPERVISORY PATENT EXAMINER

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   This Office Action is in response to communications received 09 December 2007. Claims 1 – 19 and 24 – 29 are pending. Previous objections and rejections not included in this Office Action have been withdrawn.

Response to Arguments

2.   Applicant's arguments filed 03 January 2007 have been fully considered but they are not persuasive or are moot in view of the new ground(s) of rejection.

3.   Applicant argues the references fail to teach "wherein the framework is capable of managing multiple application complexes of different types based on the configuration information provided by said plugin for each respective application-complex type", as claimed, as well as other related features added by amendment. Examiner respectfully disagrees. After reviewing the cited references, it appears that Carlson does teach different application complex types by teaching clusters offering different types of services [col. 3 lines 38 – 51; col. 4 lines 21 – 58]. Additionally, Watt teaches a specific application can be confined to a specific cluster [¶ 109]. Carlson also teaches an administrative server and tools that work with the plug-in to configure the clusters and servers in the clusters [col. 9 lines 42 – 55; col. 11 lines 28 – 43; col. 12 lines 6 – 26].

4.   Applicant's arguments appear to focus on "managing multiple application complexes of different types" as claimed. The multiple application complexes and different types of application complexes have been addressed in the above response to Applicant's arguments. See the current rejections for details regarding all recited features, including the features added by amendment.

5.   See the new ground(s) of rejection regarding rejections under 35 U.S.C. 103 and for further explanation, including arguments not specifically addressed.

Claim Objections

6.   Claim 1 is objected to because of the following informalities: a period has been added in the second to last paragraph, which makes it unclear where the claim ends. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7.   Claims 1 – 19 and 24 – 29 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Carlson (US 6,697,849 B1) in view of Choquier et al. (US Patent

5,951,694; hereinafter Choquier) and Watt (US 2003/0126202 A1).

8.   As to claim 1, Carlson teaches a system for managing application complexes,

each application complex comprising multiple tiers of servers [Figs. 2 A - C], where

servers in the same tier run an identical application and the servers of the multiple tiers

work together to provide a specific service, [col. 4 lines 21 - 58; col. 2 lines 19 - 28; col.

3 lines 38 - 51; col. 9 lines 10 - 55], the system comprising:

        a management server for managing multiple application complexes of different

types, each defined according to a respective application-complex type [col. 3 lines 38 –

51; col. 4 lines 21 – 58; col. 9 lines 42 – 55]; and

        a computer-implemented framework, executed by said management server and

capable of managing said multiple application complexes of different types based on

configuration information provided by a plug-in for each respective application-complex

type [col. 3 lines 38 – 51; col. 4 lines 21 – 58; col. 9 lines 42 – 55; col. 11 lines 28 – 43;

col. 12 lines 6 – 26], the framework including:

        a plug-in interface adapted for coupling said plug-in to the framework,

wherein the configuration information provided by said plug-in encapsulates a

relationship between one or more resources composing the respective application

complex type and respective characteristics of said resources [Fig. 4; col. 3 lines 38 -

51; col. 10 lines 7 - 32]; and

a user interface adapted to the application-complex type according to the
configuration information provided by said plug-in wherein said user interface is
responsive to user operations for interfacing with the framework for defining an
application complex as an instance of the application-complex type [col. 2 lines 19- 34;
col. 4 lines 21 -38; col. 13 lines 23-29];

wherein the framework, in cooperation with said plug-in, is capable of applying
configuration operations on application complexes of the respective application-
complex type [col. 3 lines 38 – 51; col. 4 lines 21 – 58; col. 9 lines 42 – 55; col. 11 lines
28 – 43; col. 12 lines 6 – 26].

The tiers correspond to clusters in a given tier [col. 1 lines 22 - 25; col. 3 lines 33
- 38] (and service groups in Choquier [col. 7 lines 44 - 52]). Although Carlson indicates
that users can control the system it does not specifically state that a user populates the
application complex with servers. However, Choquier teaches allowing the user to
populate the application complex with servers using input to said framework via a
console [col. 7 lines 44 - 62]. It would have been obvious to one of ordinary skill in the
art at the time Applicant's invention was made to combine these references because
Carlson discloses adding servers to clusters [col. 4 lines 34 - 36] without providing
details on how servers are added and Choquier discloses allocating additional servers
to service groups [col. 7 lines 53 - 62]. It is also noted that Choquier teaches running
the same service application on servers of a group [col. 7 lines 44 - 52].

Carlson appears to teach controlling and managing application complexes of
different types as claimed by teaching clusters offering different types of services [col. 3

lines 38 – 51; col. 4 lines 21 – 58]. Furthermore, Watt teaches controlling and managing application complexes of different types by teaching a specific application can be confined to a specific cluster [¶31, 108, 109]. It would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to combine these teachings because both teach managing server clusters.

As to claim 2, the combination of Carlson, Choquier and Watt (citations refer to Carlson unless otherwise indicated) teaches that said configuration information provided by the plug-in includes information relating to the type of the application complex, the number of tiers, the application which the servers in each tier should run, and one or more properties of the application complex whose values can be specified by the user for each instance of the application complex type [Figs. 11 and 14; col. 15 lines 29 - 47]. For type of complex and number of tiers, Fig. 11 shows a server in a hierarchy, including identifiers that indicate types [col. 6 lines 32 - 33]. Since application servers are part of a tier in the system [Fig. 2 A- C] and are shown in the partial tree [col. 6 lines 32 - 33], it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to include the tiers (where the servers are located) in the higher levels of the tree. By listing the elements of the system, including tiers, it shows how many tiers exist.

As to claims 3 – 19, the combination of Carlson, Choquier and Watt (citations refer to Carlson unless otherwise indicated) teaches that:

[claim 3] the plug-in is responsive to a change in one or more properties of the application complex for updating the framework and configuring at least one of said servers in accordance with said change [col. 4 lines 1 -38; col. 13 lines 23 -41];

[claim 4] said configuration information provided by the plug-in includes information relating to one or more properties of the application complex whose values are to be monitored by the plug-in, and wherein the plug-in is adapted to monitor said properties and return their respective values or functions thereof to the framework [col. 11 lines 12 - 42; col. 12. lines 6 - 26];

[claims 5 and 6] the plug-in monitors said properties automatically or in response to a request by the framework [col. 7 lines 53 - 62];

[claims 7 and 8] the plug-in is responsive to a new server being added to (claim 7), or a server being removed from (claim 8), a tier in the application complex for updating the framework and automatically (re)configuring said server and other servers in the application complex that relate to said server [Choquier: col. 7 lines 53 - 62; col. 11 line 58 - col. 12 line 7];

[claim 9] the plug-in is adapted to request the framework add a new server [col. 4 lines 33 - 38] [Choquier: col. 7 lines 53 - 62; col. 11 line 58 - col. 12 line 7];

[claim 10] the plug-in is adapted to request the framework remove a server that belongs to the application complex [Choquier: col. 7 lines 53 - 62; col. 11 line 58 -col. 12 line 7];

[claim 11] the user interface is configured to allow a user to change one or more

properties of an application-complex instance created by the user [col. 12 lines 6 - 33]

[Choquier: col. 7 lines 53 - 62];

[claim 12] the user interface is configured to display properties of an application-

complex instance created by the user and to allow one or more properties thereof to be

changed [Fig. 14; col. 15 lines 29 - 36];

[claim 13] the user interface is a graphical user interface [Fig. 14];

[claim 14] the user interface is adapted to display current instances of application

complexes, and to display servers currently included in each tier thereof [Fig. 11; col. 13

lines 22 -41; see also the rejection of claim 2];

[claims 15 and 16] the user interface is adapted to allow the user to move a

server from a free pool of servers into (claim 15), or remove a server from (claim 16), a

tier of an application complex instance, and the framework is responsive thereto for

identifying the plug-in corresponding to said application-complex instance for requesting

said plug-in to reconfigure the server and other servers in the application complex

instance that relate to said server according to the properties of the application complex

instance [col. 10 lines 7 -32; col. 12 lines 6- 26] [Choquier: col. 11 line 58 -col. 12 line 7;

col. 23 lines 36 - 48];

[claim 17] the user interface is adapted to allow the user to move a server from a

tier of a first application-complex instance to a tier of a second application-complex

instance that is different from the first application-complex instance, the respective tier

in each of said instances having an identical class [Choquier: col. 7 lines 53 - 62; col. 9

line 35 - col. 10 line 21; col. 23 lines 36 - 48], and the framework is responsive thereto

for:

identifying the plug-in corresponding to said first application-complex

instance for requesting said plug-in to reconfigure the server and other servers in the

first application-complex instance that relate to said server according to the properties of

the first application-complex instance, the plug-in being responsive to said server being

removed from the tier in the first application complex for automatically configuring said

server and any other servers in the first application complex that relate to said server

[col. 10 lines 7 - 32] [Choquier: col. 11 line 58 - col. 12 line 7; col. 23 lines 36 - 48]; and

identifying the plug-in corresponding to said second application-complex

instance for requesting said plug-in to reconfigure the server and other servers in the

second application-complex instance that relate to said server according to the

properties of the second application-complex instance, the plug-in being responsive to

said server being added to a tier in the second application complex for automatically

configuring said server and other servers in the second application complex that relate

to said server [col. 10 lines 7 -32] [Choquier: col. 11 line 58 - col. 12 line 7; col. 23 lines

36 - 48].

[claim 18] the user interface is adapted to allow the user to move a server from a

first tier of an application-complex instance to a second tier thereof (Although moving

between tiers in a single complex is not specifically stated, Carlson teaches that web

servers can make use of local data or application servers [col. 7 line 60 - col. 8 line 7].

Therefore, depending on the requests being received [col. 7 lines 60 - 63], the load of

the two tiers can vary and justify reallocating servers as taught by Choquier [col. 23

lines 36 - 48]), said first and second tiers having an identical class [Choquier: col. 9 line

35 - col. 10 line 21], and the framework is responsive thereto for:

    identifying the plug-in corresponding to said application complex instance

for requesting said plug-in to reconfigure the server and other servers in the first tier and

in the second tier of the application-complex instance that relate to said server

according to the properties of the application-complex instance, the plug-in being

responsive to said server being removed from the first tier and added to the second tier

for automatically configuring said server and other servers in the application complex

that relate to said server [col. 10 lines 7 -32; col. 12 lines 6- 26] [Choquier: col. 7 lines

53 - 62; col. 9 line 35 - col. 10 line 21; col. 23 lines 36 - 48].

    [claim 19] the user interface is adapted to display the monitored values for each

of the monitored properties of an application-complex instance created by the user and

to interact with the plug-in corresponding to each application-complex instance to

receive the monitored values [col. 13 lines 22 -41] [Choquier: col. 24 lines 4- 12].

    As to claims 24 and 25, see the rejection of claim 1. The disclosure of Carlson

includes object-oriented programming [col. 8 lines 51 - 63].

As to claims 26 – 29, see the rejection of claims 2 and 3.

Conclusion

9.   Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan Price whose telephone number is (571) 272-4196. The examiner can normally be reached on 6:00am - 2:30pm, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Thomson can be reached on (571) 272-3718. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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